ABSTRACT

A method for managing a data storage system, consisting of configuring a first cache to retrieve data from and store data at a first range of logical addresses (LAs) in a storage device. A second cache is configured to operate like the first cache. The method further includes configuring one or more third caches to retrieve data from and store data at a second range of LAs in the storage device.

The method includes detecting an inability of the second cache to retrieve data from or store data at the first range of LAs. In response to the inability, at least one of the first cache and the one or more third caches are reconfigured to retrieve data from and store at the first range of LAs while continuing to retrieve data from and store at the second range of LAs.